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ABSTRACT

A program was developed to improve auditory and visual stimulation and responsiveness for seven elementary school students (ages 6-7) who had severe/profound mental retardation and multiple disabilities. After initial observation, consultation, and assessment of the students, the 12-week intervention program involved auditory, tactile, and visual stimulation. In addition to daily interventions with a staff member and aide, three nondisabled fifth grade students provided assistance with the activities twice a week. Activities focused on helping students respond to touch and encouraging students to reach for and touch objects. Types of tactile, auditory, and visual stimulation activities and materials are described, along with electronic materials such as a switch toy. Additional activities were added when students began making choices using a communication board. After pretesting students' initial functioning, daily performance on the activities was documented, and a posttest assessed physical performance of the intervention activities. Results indicated that subjects increased their auditory and visual skills in most targeted areas. Pretest and posttest observation checklists and the findings are appended, along with a daily score sheet. (SW)

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DEVELOPMENT OF A PROGRAM TO TARGET SUCCESSFUL TEACHING TECHNIQUES FOR INCREASING AUDITORY AND VISUAL RESPONSES IN SEVERELY PROFOUNDLY MENTALLY HANDICAPPED STUDENTS

by

Verna M. Elson

A Practicum Report

Submitted to the Faculty of the Abraham S. Fischler Center for the Advancement of Education of Nova University in partial fulfillment of the requirements for the degree of Master of Science.

The abstract of this report may be placed in a National Database System for reference.

May/1995

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Abstract

Development of a Program to Target Successful Teaching Techniques for Increasing Auditory and Visual Responses in Severely Profoundly Mentally Handicapped Students

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Descriptors: Stimulation/ Visual and Auditory Responses/ Student Motivation/ Behavior Change/ Prompting/ Severe Mental Retardation/ Classroom Environment/ Reinforcement/ Performance.

In the 1994-1995 school year, this practitioner was the teacher of seven profoundly mentally handicapped students who were observed to be unstimulated and unmotivated in their responses to visual and auditory stimulus in the environment. The practitioner's observations and concerns were confirmed after speaking with the parents and former teachers of the students. This discovery led to an interest in developing a program to target successful teaching techniques to improve auditory and visual stimulation in these students. This program was divided into three phases, namely: observation and research, implementation, and evaluation. This project took approximately nine months with 12 weeks designated to implementation of the developed program. Prior to implementation, a pretest was given to determine the students' present level of functioning. The same test was given at the end of the 12 weeks to evaluate progress. The results indicted that the target group of students increased their auditory and visual skills in most of the targeted areas. The appendixes include student data, results of the survey, and test results.

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CHAPTER I

Purpose

Background

The setting for this practicum was an elementary school located in the southwest area of a large metropolitan city. The school had served the community since 1955. Enrollment at the school site totaled 797 students. There were six grade levels ranging from pre-kindergarten to fifth grade. The student population was 70.1 percent Hispanic, 24.3 percent White, 4.1 percent Black, and 1.4 percent Asian.

The school had several special programs that fostered and catered to the students' differences and needs. Thirty-seven percent of the student body was disabled; and in the exceptional education program, over six percent of the students were in the gifted program, and 56 percent in regular education. The Exceptional Student Education program consisted of students who were learning disabled, physically handicapped, visually handicapped, and mild to severely mentally handicapped. The school also provided before- and after-school care to accommodate parents who worked, in an attempt to provide adult supervision and social interaction for students. The school worked closely with parents. There was a very active Parent-Teacher Association, and several parent volunteers worked in different programs at the school.

The instructional staff consisted of a principal, two assistant principals, 55 teachers, a counselor, a media specialist, several physical, speech, and occupational therapists, and other support staff. The geographic area surrounding the school was comprised of mostly blue-collar workers. Forty-three percent of the students were eligible for free or reduced-price lunch.

The target group was composed of seven Severely and Profoundly Mentally Handicapped (S/PMH) students. They ranged in age from six to seven years old. The practitioner of this practicum had been teaching for over 10 years, and had experience working with students of all ages in both regular and exceptional education settings. At the time of the practicum, the practitioner was working as a classroom teacher of the profoundly mentally handicapped and had been working with this population for three years. During this time, much effort was made to understand the students' level of performance and achievement. To gather data, the practitioner observed the target group's past and present evaluation results and classroom performance, and talked to other teachers and caregivers about the students. Based on the results of the practitioner's observations and research, these students seemed to lack stimulation and were unable to interact with their environment.

Problem Statement

Research and observation showed that even the most handicapped person could learn when the environment was appropriately structured and adapted to meet the student's individual needs. According to research, a program for the profoundly handicapped population needed to be provided in an environment that

was free from external threats and capable of promoting sufficient stimulation to enhance learning. In most cases, students who were profoundly mentally handicapped were being taught to participate in activities that were age appropriate and that were similar to those of their non-handicapped peers.

The curriculum for this population had to be well-defined, teaching tasks that were based on the students' functioning environment. The activities had to promote functional skills which were most needed and desirable for students to learn, since these skills were more likely to produce a response from students to their environment. Bricker and Filler (1985), researchers and educators, also recommended the need to apply early stimulating activities to increase and improve the quality of students' response. They proved that early stimulation activities had a more lasting impression on students.

In selecting the target group, the practitioner discovered through direct teacher observation, other teachers' observations, and review of assessment records, that 80 percent of these profoundly mentally handicapped students were unresponsive to their environment and had not progressed one step to a higher level skill or mastered their Individual Education Plan (IEP) goals over a two- to three-year period.

Most of these students had multiple handicaps that were probably affecting their ability to probe and interact with new and varied experiences. Many of their disabilities also prevented or retarded their ability to receive or attend to sensory and auditory stimulation from the environment. The practitioner concluded that if profoundly mentally handicapped students lived in an environment that was static

and lacked stimulation, they would accept this as being a normal pattern and continue to be less energetic and more dependent on others.

All of the students in the target group had been diagnosed as Severely and Profoundly Mentally Handicapped (S/PMH) with multiple handicaps. According to Bricker and Filler (1985), behaviors in S/PMH students varied in several ways because of the high rate of medical problems, physical disabilities, and sensory and motor impairments suffered by this population. Some students seemed to have a normal growth pattern similar to their non-handicapped peers, while others deviated greatly. Some students had hearing and visual impairment, while others heard and saw well. Some profoundly mentally handicapped students had excellent motor skills which afforded them adequate mobility, while others had neurological damage and cerebral palsy. Some students also communicated by sign language or speech, while others lacked the ability to communicate. Some could even interact with their environment, while others were totally unstimulated.

The students in the target group were performing many years below their non-handicapped peers, both academically and developmentally (Appendix A, p. 29). They also lacked the ability to receive environmental stimuli. They had not mastered lower level skills needed to progress toward higher level skills. The practitioner's concern was confirmed through discussions with previous teachers and parents, observations of previous report cards, class performance, a parent/caregiver survey (Appendix B, p. 31 and Appendix C, p. 33), and the results of their placement assessment. The students were assessed through the use of two instruments: the Brigance, and the TARC (Topeka Association for Retarded Citizens).

When the target group was presented with a task in self-help skills, the practitioner observed that most of the students were unresponsive to touch, and they were unwilling to perform task even with continuous physical and verbal prompting. Most of the students portrayed defensive behaviors, such as crying, pulling away from the instructor, throwing away or destroying materials placed before them, and in two cases, even scratching the instructor.

Although the functioning abilities of these students were somewhat limited, it was felt that early intervention strategies would increase performance to a certain degree of independence. The practitioner observed that there was a correlation between the students'present level of functioning and their environment. Since all the students in the target group had trouble responding to stimuli and new experiences, it seemed evident that the target group needed to be provided with a program that would support a structured environment and ongoing stimulating opportunities to help maintain learned skills, or to promote changes in behavior and functioning.

Based on the problem previously mentioned, it was evident that the students in this target group needed more stimulation to improve and enrich the learning environment and elicit response to new experiences. A program for these students was developed to address their lack of skills resulting from the handicapping conditions and focused on goals that tried to create an ongoing positive, supportive atmosphere which aimed to produce change in the response pattern. The problem in this practicum project was to target successful techniques for increasing auditory and visual responses in S/PMH students in the elementary school.

Outcome Objectives

The practitioner developed a program that targeted successful teaching techniques that positively increased students' response to stimuli, and also motivated S/PMH students to learn some skills and increase awareness of their environment. Over a period of 12 weeks, the practitioner's objective was to show the impact of some of these successful teaching techniques on the target group of seven profoundly mentally handicapped students.

The 12-week program included auditory and sensory stimulating activities. The daily activities were stated and performed in task analysis. The results were measured through observation of the students' daily task performance, and by a pretest and a posttest. A weekly checklist was kept for each student. Given 12 weeks of intensive visual and auditory stimulation activities, the targeted profoundly mentally handicapped students were expected to:

a) respond to environmental visual prompts three out of five times when given five trials,

b) respond to auditory environmental prompts three out of five times when given five trials,

c) demonstrate an increase in auditory response as indicated by pre and post assessment data (Appendix D, p. 35 and Appendix E, p. 37),

d) demonstrate an increase in visual response as indicated by pre and post assessment data (Appendix D, p. 35 and Appendix E, p. 37).

CHAPTER II

Research and Solution Strategy

In an attempt to identify and verify the impact of some successful teaching techniques to increase the response of the profoundly mentally handicapped population, the practitioner collected data which addressed the specific results of studies and experiments from different sources. The information was gathered from related articles and computer searches, educational journals and articles, periodicals, textbooks, and from interviews with parents and professionals who have worked with the severely and profoundly mentally handicapped population.

In researching this area of the impact of successful teaching strategies in increasing students' response to their environment, the practitioner observed that the number of studies conducted on non-verbal severely and profoundly mentally handicapped students was very limited. This could be as a result of the difficulty in working with and getting a response from these students due to the nature of their severe physical and sensory handicaps. However, some of the few available studies investigated the effectiveness of programs to encourage response and participation in these students.

Severely and profoundly mentally handicapped students are often unable to use their sensory input to interpret and organize stimulation from their environment. Research has shown that stimulation can be a successful strategy to decrease the unresponsiveness of these students to their environment due to confusion. Sensory

stimulation is described as pulling together or organizing and interpreting sensory stimuli into a whole integrated system of sensations for everyday use.

Anderson and Brady (1993) conducted a study that investigated the improvements in specific motor responses of two children with severe and multiple handicaps. The authors theorized that interactions with teachers and peers would elicit a higher rate of response. Both students in this study were non-verbal. One was blind and made her needs known by laughing in a purposeful manner, babbling, and crying. The other student was non-ambulatory and communicated by crying, with loud whining, and by laughing in a purposeful manner. The social, physical, and verbal interactions were observed.

The results showed that both adult and peer interactions had an effect on the students' behavior. Both students increased their motor responses when interacting with people, and while doing social and instructional activities. The authors emphasized that students with severe and multiple handicaps need social environments in which to learn. The program for the severely and profoundly mentally handicapped population must include peer intervention and choice making. Peer interaction encourages response and feedback.

Innocenti, et al. (1986) also evaluated and reported on a study on the effect of peer interactions in classroom activities. The study was conducted in four preschool classrooms using aspects of three events: teacher behavior, use of materials, and peer presence. The results proved that in activities in which there were peer interactions, the students participated more in the given activities. The study also indicated that peer interaction can produce a positive response in the classroom.

Murphy (1984) reviewed the impact of sensory reinforcement on the mentally handicapped and autistic child. The goal of this study was to review several studies that documented the use of sensory reinforcement in both animals and people. The author was motivated by his and other people's conviction that children need stimulation from their environment in order to learn. Murphy discussed the results of several studies that used a similar procedure with severely and profoundly mentally handicapped and autistic children. The results showed that even the most severely retarded child can learn to operate a lever switch. The students were presented with a lever or switch that when operated would produce a burst or flash of light, music, sounds, pictures, or vibrations. At first, the students were given physical and verbal prompts until they learned to do it themselves.

Murphy also examined some studies that tried to establish whether some responses were reinforced by a variety of sensory stimuli, with the hope of discovering what kind of stimuli would act as reinforcers. The results and ranges of success varied to some degree. In a study that involved several subjects, one child only responded to the records of a specific recording artist and not to others. In another study, two students learned to operate a lever when reinforced with contingent light. These same students would not respond to auditory stimulus. On the other hand, many students found vibration stimuli reinforcing. The results demonstrated that very profoundly mentally handicapped students could learn the responses with a very specific sensory preference. The most important, interesting, and useful results of the study on sensory reinforcement on the severely mentally handicapped population showed a decline in stereotyped behavior such as rocking, banging, sucking the finger, and slapping. It also reinforced everyday skills.

The studies demonstrated that sensory stimuli could be used just as any other reinforcer. According to the studies, it now seems that even profoundly mentally handicapped children can learn to operate simple levers when they are reinforced by sensory stimuli, and that some children have learned higher level skills through sensory reinforcement.

Another popular and successful teaching technique used with the profoundly mentally handicapped population is prompting. Prompting consists of a number of techniques which include physical prompts, verbal cues, highlighting or accenting, and imitation or modeling (Patton, et al., 1990). Prompting is used to acquire a desired response because the severely/profoundly handicapped students often do not follow instructions or understand commands. It provides an ongoing assistance to the students until a correct response is achieved.

Davis, et al. (1992) published the results of an important study which showed the success of auditory prompting techniques in improving task performance fluency. It involved using self-operated auditory prompting and picture prompts as step-by-step cueing. The participants were two young men and one young woman who were enrolled in a life skills program. Prior to the study, each participant had to demonstrate the ability to perform a given task when prompted by adults, and had to show a dependence on trainers for instructions or stimulus control.

The results were determined by comparing participants' independent rates of task completion to their prompted completion rates. The materials included tape players with start and stop buttons and headphones. While the students were working, they were given auditory cues while listening to familiar, popular music

through the headphone. At intervals, auditory cues were given to inform the students what to do to keep them on task. These auditory prompts were successful in increasing task fluency and maintaining skill acquisition for all the participants involved.

A self-operated auditory prompting system can be used as a permanent prompting strategy for handicapped individuals to be more productive without assistance from teachers, staff, and aids. It could also cut down on the unproductive time when students have to wait to get one-on-one instruction while the teacher is occupied with another student. Another important advantage of self-operated prompting is that it decreases stereotypical behavior of students when prompts are delivered by the device.

Based on data gathered from observations, Mold (1993) endorsed the effectiveness of using prompts and cues to teach mentally handicapped students. Over a period of time, the author observed that in her physical education class of mentally handicapped students where students were being taught to form lines and circles, a young child became frustrated when told repeatedly to sit down. However, after trying various techniques to get a favorable response, visual cues and physical prompts were applied along with verbal directions. After the prompts and cues were applied, the child responded by following directions and sat down.

Mold concluded that the child became frustrated because of the initial request's lack of clarity at a level the child could understand. The visual cue provided continual reinforcement which led to skill acquisition for the profoundly mentally handicapped students. The employment of visual cueing also offered continual verbalization of commands and concrete support.

Solution Strategy

Miles (1985) documented in a report summarizing the discussions which took place at an international conference on the profoundly mentally handicapped in Madrid, Spain in 1985, that experience and techniques have now accumulated demonstrating that far more progress can be made with profoundly mentally handicapped persons that was thought to be possible. In this discussion of better methods of education for the profoundly mentally handicapped and other documented debates, it has become evident that no single approach could satisfy every need. Professionals and parents were admonished to be flexible in considering and practicing a variety of approaches. In light of this premise, this practitioner chose to look at and investigate several technique in this practicum project.

The practitioner selected the first three studies discussed which used sensory stimulation to improve and increase students' response and involvement. Anderson and Brady (1993), Innocenti, et al. (1986), and Murphy (1984) prescribed peer interactions, object manipulation, and choice making as important components of each particular study. Based on these authors' conclusions, skills can be developed with training, persistence, and consistency. When functional skills were developed, the individual student became more independent and better able to interact and respond in a more meaningful way with the environment.

This practitioner strongly supported the idea of peer interaction and peer intervention. The students were allowed to interact with non-handicapped students. The practitioner's previous experience with peer interaction had shown minimal progress.

The studies conducted by Murphy, Davis, et al., and Mold described the progress shown by using prompts to encourage the desired response. These researchers' successes served as an encouragement to this practitioner in planning the program to stimulate students to interact with their environment. This has proven to be a very viable strategy in improving the auditory and visual skills in profoundly mentally handicapped students.

The practitioner developed a program which modeled the previously mentioned techniques. This program included activities that assisted in integrating the input students received from their environment, and helped them respond to input in an appropriate manner. The program was also used by the occupational and physical therapists as well. It involved a series of activities in tactile skills and kinesthetic skills. At the inception of the program, the classroom was set up to facilitate these activities.

Prior to the implementation of the program, observations were made of students' behavior to gather data to compare with results at the end of the 12 weeks. These observations showed that approximately 80 percent of the severely/profoundly mentally handicapped students were unable to respond to stimulus from their environment. The goal of the practitioner was to increase the students' response to auditory and visual stimuli in the environment.

CHAPTER III

Method

The target group consisted of seven severely/profoundly mentally handicapped students. The group was divided into three smaller groups where they worked together over a 12-week period with other students in the classroom, with non-handicapped students from the regular program, a teacher's aid, and the practitioner. The aid served as a group leader and instructor in the activities throughout the 12 weeks.

During the period of implementation, the students' awareness of their environment was being developed through tactile and kinesthetic activities based on their individual needs. The series of activities concentrated on auditory, tactile, and visual stimulation (Appendix D, p. 35). These activities were ongoing throughout the project. The students were not given more than two activities per lesson each day, lasting from 10 to 15 minutes. There were variations to most of the activities to provide for each student's needs. Most of the students had to be dealt with on an individual basis due to their level of disability, their goals, and their needs. Each student had different goals based on the results of the pretest.

Because 85 percent of the students in the target group had limited motor control due to cerebral palsy, the occupational and physical therapists consented to participate and provided consultive services to the practitioner throughout the 12-week implementation period.. They also assisted with some of the activities,

suggested modifications, and provided and recommended resource materials when necessary.

The first week of the program was spent setting up and introducing the activities to the students. During this week, the students' reactions to the activities were keenly noted. The activities focused on getting the students to be more receptive to touch in order to decrease any resistant behavior, to improve motor control, to build self confidence, and to increase students' response to visual and tactile stimuli. Mirrors were placed so that students could see themselves while instructors talked to them about what they were looking at. Students were prompted to pat or point to themselves in the mirror. Variations of this activity involved students looking at their reflections in a mirror placed in water. To increase tactile and visual awareness, students were prompted to spread lotion or shaving cream over the mirror using one or both hands. They were also encouraged to look at, track, and reach for mobiles made of brightly colored pictures when they were removed and placed in different locations. A flashlight was also used to get students to turn their eyes toward light and to track objects. Variations of this activity included grasping or touching objects (for 1-5 seconds) while in a prone position; tracking objects in a circular path; looking at or touching bright colored yarn/ribbons tied on students' arms and legs; and looking and following objects dropped from midline.

The therapists were introduced to the students and the aid. The therapists came in the first week and took care of the physical needs of each child. They demonstrated a proper positioning program so that each child got the opportunity for maximum degree of movement and motor control.

The program suggested by the therapists also included additional exercises to improve motor control and object awareness. Students with low muscle tone were given the scope to strengthen and control arm and finger muscles in order to be better able to manipulate objects in the environment. Students with high muscle tone were allowed to practice relaxation techniques to gain muscle control. This was part of the weekly group activities that was open for modification and changes.

The actual activities began the second week of implementation and continued daily thereafter. The objective of these activities was to increase students' response to tactile stimulation through visual responses. The students were encouraged to manipulate objects by reaching for and touching objects with and without prompting and cues. By the end of week two, the students were showing some positive response to objects they came into contact with. The activities included tactile stimulation such as rubbing lotion over the body, allowing someone to run lotion on the body without resistance, touching a surface that provided tactile input--clay/water/sand play, beach ball activity, and grabbing, grasping, pushing, and pulling activities.

Objects were presented to students, and prompts and directions were given, with assistance, to briefly brush, touch, or grasp objects. The students were given the opportunity to explore shapes, textures, and temperature of some objects and materials. Pieces of cloth of different textures--soft, slippery, smooth, bumpy, rough--were used to rub over students' arms and legs. The instructor named feelings while actions were being done. The most exciting activity was the water play which involved playing with water placed in plastic containers, squeezing out a wet sponge, and splashing water using hands. About three weeks into the

program, the class acquired a water table which made the activity accessible to more students.

Twice a week, three fifth grade students from the regular program came to assist the target group with the activities. These students were already working with the target group in physical education. They were trained to assist these students in each activity using prompting techniques. The training took place prior to the beginning of implementation for approximately 30 minutes per week for four weeks. They were trained in how to use physical and verbal prompts and cues to elicit a response from the target group. They were also trained to demonstrate an activity, then follow up with giving a simple direction to the students. The fifth grade students were then brought into the program to work with an assigned student.

By the third week of the program, students were working on responding to auditory stimulation. They had to try and find the source of different sounds made by rattles, musical instruments, and spoons. Students were placed in a comfortable position, then the instructor shook an instrument near the students' heads, and prompted them to turn their heads toward the source of the sound. Some students were prompted to crawl toward the sound and object. There were some variations to these activities which included listening to familiar sounds on tape, such as nursery rhymes, running water, toys banging, songs, and stories. Tapes were played while the instructor named and imitated the sound. The students were prompted and instructed to look at the speaker's face. The source of the sound was moved to a different location and the students were verbally and physically prompted to turn their heads toward the source of the sound. Instructors smiled at

students and tried to encourage a similar response. The tape was played at different ranges--soft, loud, medium--while the instructor observed each student's response to the ranges of sound.

For weeks four and five, the students continued working on activities started in weeks one through three. After six weeks of the program, the students were introduced to an additional activity which gave them the opportunity to use electronic materials such as a switch toy. The objects included things that were interesting and fun to look at, such as noise-making toys, reflective objects, a radio, and toys that moved. The toys were attached to the big red switch that made them easier to see and feel. The toys produced sounds when activated. Students were taught how to activate the toys to make sounds. The instructor placed each student's hand on the switch, then placed his/her hand over the student's hand and helped the student to press the switch so that the student would receive auditory reinforcement when the switch was touched. This was done several times, then the prompt was faded. Prompts continued to decrease as the students' functioning progressed. The students were evaluated on the use of the switch toy.

By the beginning of the eighth week, additional activities were added where students began making choices using a communication board. The students were given two actual objects and prompted to choose one as instructed. The instructor modeled and did hand-over-hand pointing to train the student to use pointing to communicate. From then on, the students had to make choices by pointing to one or the other of the displayed objects or pictures in other daily activities.

At the beginning of the twelfth week, the practitioner continued with the activities. A posttest (Appendix E, p. 37) was given at the end of the week. The

posttest was in the form of the actual physical performance of the tasks and activities practiced during the implementation period. The instructors went through the usual daily activities and observed each student's performance. The results were assessed and compared to each student's performance before the project began in order to determine progress.

CHAPTER IV

Results

Daily and weekly assessments were made based on the instructor's observations of the students' performance while on task. Data was gathered and recorded daily by the teacher and aid (Appendix F, p. 39). At the end of each day, the practitioner collaborated with the aid and assessed each student's performance. If goals were not achieved as stated in the original objectives, the practitioner suggested alternate activities to encourage a response.

The data was recorded in tabular and narrative forms. The tables clarified weekly students' performance and progress in their specific goals focused on during the practicum project. Five trials were given to each student for each activity. A response was correct if the student attempted or tried to attempt the activity three out of the five trials, as stated in the objectives. The daily checklist included four areas of responses. They were:

0 - did not attempt task

1 - attempted task (20 percent), one out of five trials

2 - attempted task (40 percent), two out of five trials

3 - attempted task (60 percent), three out of five trials

4 - attempted task (80 percent), four out of five trials

5 - performed task (100 percent), five out of five trials

By the end of the second week of the implementation of the program, some improvements were shown in some areas. Seventy percent of the students

appeared to be happier, more responsive to, and more involved in, their surroundings. There was observable growth in the areas of tactile and visual stimulation. An example of this was the way the students began to seek out and reach for the mobiles and pictures hanging in the classroom. This led the practitioner to believe that if this program were to continue over a longer period of time, much more progress could be achieved. There was also positive response in some students' behavior.

Daily, each student was attended to on an individual basis while working on personal goal(s). Some adaptations were made to accommodate students' differences, likes, and dislikes. An example was student number six who was very tactile-defensive and would not respond to the stimulus (lotion or shaving cream) used to get her to open her hands. After speaking with her mother, it was learned that she was intrigued with water. This information was used and modifications were made to the activities. A water table was brought in for her use. The student began to try harder and responded to stimuli surrounding water after the change.

The most outstanding result of the project was in the overall progress in the students' behavior in responding to their peers. The most observable change in the students' behavior occurred when the fifth grade students were working with the target group. Students one, four, six, and seven became radiant, happier, and much more involved in the activities while working with the non-handicapped students.

The following tables document the results of the students' performance during the 12 weeks of implementation.

Table 1

Student 1 - Weekly Average

Goal	Week	Percentage
Roll from stomach to back	1	0
	3	20
	7	20
	8	60
Respond to simple direction	2	20
	4	20
	9	40
	11	60
Listen to story	5	0

Table 2

Student 2 - Weekly Average

Goal	Week	Percentage
Relax spasticity	1	0
	3	0
	7	20
Move head in direction of stimulus	2	20
	4	40
	9	20
Extend arms/open hands	5	20
	6	40
	10	60
Follow objects in a circular path/	8	40
Move head to follow object	11	80
	12	100

Table 3

Student 3 - Weekly Average

Goal	Week	Percentage
Touch object/extend arms	1	0
	3	0
	7	20
Grasp objects	2	0
	4	0
	9	0
Turn head toward source of sound	5	20
	6	20
	10	60
Fix eyes on object for 1-5 seconds	8	20
	11	40
	12	60

Table 4

Student 4 - Weekly Average

Goal	Week	Percentage
Respond to simple direction	1	20
	3	20
	7	60
	8	80
Wave bye-bye	2	0
	4	0
	9	0
	11	0
Listen to a story	5	0
	6	20
	10	20
	12	20

Table 5

Student 5 - Weekly Average

Goal	Week	Percentage
React to talking, humming, silence/ singing	1	0 (absent)
	3	0 (absent)
	7	0
	9	20
	11	20
	12	0 (absent)
Turn eyes toward light	2	0 (absent)
	4	0 (absent)
	5	20
	6	20
	8	20
	10	60

Table 6

Student 6 - Weekly Average

Goal	Week	Percentage
Listen to a story	1	0
	3	20
	7	20
	8	40
Move body toward loud sound	2	20
	4	40
	9	40
	11	60
Open hands	5	40
	6	40
	10	60
	12	80

Table 7

Student 7 - Weekly Average

Goal	Week	Percentage
Look at speaker's face	1	0
	3	0
	7	20
	8	0
React to talking, humming, singing/	2	20
silence	4	0 (absent)
	9	40
	11	20
Respond to "no"/simple direction	5	0 (absent)
	6	20
	10	40
	12	40

Student number one showed steady progress in her goals. She began to show less aggression toward people and materials.

The parent of student number two reported great changes in her behavior. Prior to the program, she was very unhappy and cried continuously. This student showed surprisingly great improvement in sensory and motor skills. She began to track objects at midline and followed objects with her eyes while moving her head. By the final week of the program, she began to reach for objects and smiled at the instructor's face and at voices. She also showed response and excitement with kicking behavior and began to relax spasticity.

Observation of student number three showed that there were attempts to move arms and touch objects. There was steady progress in focusing eyes on objects and turning head toward source of sound.

Observations of student four suggested steady progress in following simple directions.

Student number five was absent for most of the time. There was noted progress in turning eyes toward light.

Observation of student number six indicated steady progress in targeted goals.

Student number seven showed minimal progress. This student was frequently disruptive, very easily distracted, and very destructive to materials. She often had to be redirected on task. However, the continuous pattern of activities helped to cut down on some of these inappropriate behaviors and increased her attention span and tolerance to participate in some activities.

The assessment of pretest and posttest results indicated that the objectives of this practicum project were achieved. The data gathered and analyzed gave an overall picture of the positive changes in the students' performance. About 80 percent of the target group of profoundly mental handicapped students progressed significantly in most areas. There was not much progress shown in the area of communication.

This practicum uncovered two major concerns. Firstly, the time allotted for this project for this population was too short to note measurable success. From the practitioner's experience in working with this population, it takes about a year to show substantial achievement. Secondly, the study should not be limited to the classroom. The parents should continue some of the activities at home to reinforce learning.

CHAPTER V

Recommendations

This practicum project increased visual and auditory stimulation for the target group of profoundly mentally handicapped students and encouraged the instructors and parents of the students. Parents were advised by the practitioner on how to continue the process at home to reinforce the skills. The practitioner had an open classroom where the parents were invited to come and see the students at work. The practitioner took every opportunity to introduce parents to the equipment used with their children, and the activities aimed at accomplishing their goals.

The practitioner will continue to use the same goals and activities in the future with these and other students. The practitioner will endeavor to have the activities developed in this project implemented into the curriculum for the profoundly mentally handicapped students, and also serve as resource materials for parents and other caregivers in this population. These activities can also be adapted to be used in other areas of Exceptional Student Education. The practitioner also plans to share the results of this project with colleagues and college students who work with profoundly mentally handicapped students.

By participating in this project, the practitioner has gained valuable insights and experience regarding these students, and this knowledge will be used to better care for and teach them. It has also emphasized an awareness of other people's aims, objectives, concerns, and accomplishments in working with this population.

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Appendixes

Appendix A

Students' Developmental Profile

Appendix A

Students' Developmental Profile

Student	Age	Gender	Ethnic Origin	Motor Development	Communication	Social Development	Self Help
1	7	Female	Hispanic	10 Months	12 Months	24 Months	18 Months
2	7	Female	Hispanic	3 Months	3 Months	6 Months	3 Months
3	6	Female	White	6 Months	3 Months	3 Months	7 Months
4	7	Male	Hispanic	14 Months	8 Months	18 Months	25 Months
5	6	Male	Hispanic	7 Months	4 Months	4 Months	7 Months
6	7	Female	Hispanic	11 Months	6 Months	19 Months	28 Months
7	7	Female	Hispanic	19 Months	4 Months	4 Months	4 Months

Appendix B

Parents/Caregiver Pre-Implementation Survey Chart

Appendix B

Parents/Caregiver Pre-Implementation Survey Chart

There were 11 items and 7 parents responded.

	Very Much		A Little		Not At All	
Statement	Students	Percentage	Students	Percentage	Students	Percentage
1. Shy with strangers.	3	42	2	29	2	29
2. Plays with other children appropriately for age level.	3	42	3	42	1	14
3. Greets people when entering room.	1	14	0	0	6	86
4. Shows happiness when parent(s) leave(s).	1	14	2	28	4	57
5. Seldom objects when parent(s) leave(s).	2	28	1	14	4	57
6. Responds primarily to objects; but not to people.	1	14	1	14	5	71
7. Babbles only.	4	57	2	28	1	14
8. Responds to own name by eye contact.	4	57	2	28	1	14
9. Responds to own name by out-stretched arms or turning head to source of sound.	3	43	2	28	2	28
10. Obeys command "no" and/or "stop that".	2	28	2	28	3	43
11. Responds to and enjoys music.	4	57	1	14	2	28

Appendix C

Parents/Caregiver Post-Implementation Survey Chart

Appendix C

Parents/Caregiver Post-Implementation Survey Chart

There were 11 items and 7 parents responded.

	Very Much		A Little		Not At All	
Statement	Students	Percentage	Students	Percentage	Students	Percentage
1. Shy with strangers.	1	14	3	43	3	43
2. Plays with other children appropriately for age level.	5	71	1	14	1	14
3. Greets people when entering room.	1	14	0	0	6	86
4. Shows happiness when parent(s) leave(s).	1	14	2	28	4	57
5. Seldom objects when parent(s) leave(s).	2	28	1	14	4	57
6. Responds primarily to objects; but not to people.	1	14	1	14	5	71
7. Babbles only.	4	57	2	28	1	14
8. .Responds to own name by eye contact.	4	57	2	28	1	14
9. Responds to own name by out-stretched arms or turning head to source of sound.	5	71	1	14	1	14
10. Obeys command "no" and/or "stop that".	2	28	3	43	2	28
11. Responds to and enjoys music.	4	57	2	28	1	14

Appendix D

Observation Checklist (Pretest)

Appendix D

Observation Checklist (Pretest)

	Percent of Students				
1. MOTOR DEVELOPMENT	90-100	70-80	50-60	30-40	10-20
Relaxes spasticity			X		
Moves head in direction of stimulation			X		
Touches objects				X	
Opens hands				X	
Extends arms			X		
Grasps object that is placed in hand				X	
Rolls from back to stomach				X	
Rolls from stomach to back					X
Turns from side to back			X		
Opens mouth when physically stimulated				X	
Closes mouth when physically stimulated				X	
2. AUDITORY AWARENESS/DISCRIMINATION					
Turns head towards source of sound				X	
Searches for source with eyes				X	
Looks at speaker's face			X		
Reacts positively/negatively to loud voice				X	
Reacts to soft voice					X
Reacts to humming, talking, singing, or silence				X	
Moves body toward loud sound					X
Responds to "no"/simple directions					X
Listens to music				X	
Listens to stories					X
Reacts to sound of toys			X		
Reacts to sounds/movements of mechanical toys/objects			X		
3. VISUAL AWARENESS					
Turns eyes toward light				X	
Fixes eyes on object for 1-5 seconds			X		
Interacts with task in adaptive position				X	
Locates objects				X	
Focuses on object			X		
Moves head to follow object				X	
Follows object moving in a circular path				X	
Reaches for dangling object				X	
Grasps dangling object				X	
Looks for fallen object by bending over					X
REMARKS:					

Appendix E

Observation Checklist (Posttest)

Appendix E

Observation Checklist (Posttest)

	Percent of Students				
1. MOTOR DEVELOPMENT	90-100	70-80	50-60	30-40	10-20
Relaxes spasticity			X		
Moves head in direction of stimulation		X			
Touches objects		X			
Opens hands			X		
Extends arms			X		
Grasps object that is placed in hand		X			
Rolls from back to stomach				X	
Rolls from stomach to back			X		
Turns from side to back			X		
Opens mouth when physically stimulated			X		
Closes mouth when physically stimulated			X		
2. AUDITORY AWARENESS/DISCRIMINATION					
Turns head towards source of sound		X			
Searches for source with eyes			X		
Looks at speaker's face		X			
Reacts positively/negatively to loud voice			X		
Reacts to soft voice				X	
Reacts to humming, talking, singing, or silence			X		
Moves body toward loud sound				X	
Responds to "no"/simple directions				X	
Listens to music	X				
Listens to stories			X		
Reacts to sound of toys	X				
Reacts to sounds/movements of mechanical toys/objects	X				
3. VISUAL AWARENESS					
Turns eyes toward light		X			
Fixes eyes on object for 1-5 seconds		X			
Interacts with task in adaptive position		X			
Locates objects			X		
Focuses on object		X			
Moves head to follow object		X			
Follows object moving in a circular path			X		
Reaches for dangling object			X		
Grasps dangling object				X	
Looks for fallen object by bending over				X	
REMARKS:					

Appendix F

Daily Score Sheet

Appendix F

Daily Score Sheet

NAME:_____

DATE	GOALS	RESPONSES					PERCENT CORRECT

CODE: (+) Attempted task
(-) Did not respond
(/) Responded with visual prompt from instructor
(x) Responded with physical prompt from instructor